

What is Claimed is:

1. A magnetic ring unit, characterized by having at least a magnetic ring in eccentric ring form wherein the center of the inner diameter is located at a decentered position relative to the center of the outer diameter.
2. The magnetic ring unit according to Claim 1, characterized in that said magnetic ring in eccentric ring form comprises a pair of magnetic rings having coercive forces that are different from each other and in that a non-magnetic layer is intervened between said pair of magnetic rings.
3. A magnetic memory device that comprises: magneto-resistive memory elements on a semiconductor substrate, which are respectively placed in intersection regions of word lines and bit lines placed in the directions crossing each other and where first magnetic layers of which the direction of rotation of magnetization is variable and second magnetic layers of which the direction of rotation of magnetization is fixed are layered via non-magnetic intermediate layers; and access transistors of which the gates are sense lines placed in the direction that crosses said bit lines, wherein the magnetic memory device is characterized in that each of said magneto-resistive memory element is formed at least of: a first magnetic ring in eccentric ring form where the center of the inner diameter is located at a decentered position relative to the center of the outer diameter; a second magnetic ring in eccentric ring form having a coercive force greater than that of said first magnetic ring; and a non-magnetic layer provided between said first and second magnetic rings.